

**Notice of Allowability**

Application No.

10/627,155

Examiner

Stephen W. Smoot

Applicant(s)

PATEL ET AL.

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to applicant's amendment received on 08 July 2005.
2. ☒ The allowed claim(s) is/are 48-112,114-171 and 174-191.
3. ☒ The drawings filed on 24 July 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

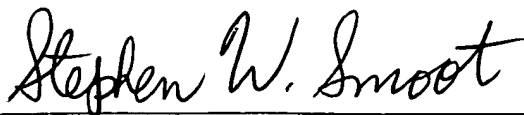
\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_



Stephen W. Smoot  
Patent Examiner  
Art Unit 2813

This Office action is in response to applicant's amendment received on 08 July 2005.

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below to correct obvious informalities per MPEP section 1302.04. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

#### **In the Claims:**

In claim 114, line 1, change the claim dependency from "claim 113" to --claim 84--;

In claim 115, line 1, change the claim dependency from "claim 113" to --claim 84--;

In claim 138, line 1, after "system", insert --of claim--; and

In claim 139, line 1, after "system", insert --of claim--.

Appropriate correction is required.

2. The terminal disclaimer received on 08 July 2005 disclaiming the terminal portion of any patent granted on this application, which would extend beyond the expiration date of any patent granted on Application Number 10/627,302 has been reviewed and is accepted. The terminal disclaimer has been recorded.

3. Claims 48-112, 114-171, 174-191 are allowed.

4. The following is an examiner's statement of reasons for allowance:

- Claims 48-83, 133-171, 174-175, 183-187 are allowed because the prior art of record does not teach or suggest, in combination with the other claim limitations, a spatial light modulator that includes an array of mirror devices, wherein each mirror device has a mirror plate attached to a hinge such that the mirror plate and the hinge are spaced apart from 0.5 to 1.5 micrometers, and wherein adjacent mirror plates have a center-to-center distance that ranges from 4.3 to 10.16 micrometers;
- Claims 84-112, 114-132, 176-182 are allowed because the prior art of record does not teach or suggest, in combination with the other claim limitations, a spatial light modulator that includes an array of movable mirror plates, wherein adjacent mirror plates have a center-to-center distance that ranges from 4.38 to 10.16 micrometers, combined with two electrodes for rotating the mirror plate in opposite directions;

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- Claims 188-189 are allowed because the prior art of record does not teach or suggest, in combination with the other claim limitations, a spatial light modulator that includes an array of mirror devices, wherein each mirror device has a mirror plate attached to a hinge such that the mirror plate and the hinge are spaced apart from 0.1 to 0.45 micrometers, and wherein adjacent mirror plates have a center-to-center distance that ranges from 4.38 to 10.16 micrometers;
- Claim 190 is allowed because the prior art of record does not teach or suggest, in combination with the other claim limitations, a spatial light modulator that includes an array of movable mirror plates, wherein adjacent mirror plates have a center-to-center distance that ranges from 4.38 to 10.16 micrometers combined with an illumination efficiency that is 90 % or more; and
- Claim 191 is allowed because the prior art of record does not teach or suggest, in combination with the other claim limitations, a spatial light modulator that includes an array of movable mirror plates, wherein adjacent mirror plates have a center-to-center distance that ranges from 4.38 to 10.16 micrometers, combined with the mirror plate being attached to a hinge for rotating in a first direction at an angle from 15 to 27 degrees relative to the substrate.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen W. Smoot whose telephone number is 571-272-1698. The examiner can normally be reached on M-F (8:00 am to 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr. can be reached on 571-272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SWS